

REMARKS

This response is in reply to the Office Action dated May 4, 2005, in which the Examiner objected to the Abstract under MPEP §608.01(b), rejected claims 1-6, 10-14 and 17-37 on prior art grounds, and indicated that claims 7-9, 15 and 16 would be allowable if rewritten in independent form. For the reasons stated in the following paragraphs, the applicants respectfully traverse the Examiner's claim rejections and request a reconsideration and allowance of those claims.

MPEP § 608.01(b) Objection to the Abstract -

In the Office Action dated May 4, 2005, the Examiner objected to the abstract for being too long. The Applicants have decreased the number of words in the abstract and believe that it is now in compliance with MPEP §608.01(b). Accordingly, the Applicants request a reconsideration of this objection.

Claim 37 Rejected Under §102(b) -

In the last Office Action, claim 37 was rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 3,861,366 (hereafter 'the Masaki patent'). Claim 37 has been cancelled, thereby obviating that rejection.

Claims 1-6, 10-14 and 17-36 Rejected Under §103(a) -

Claims 1-6, 10-14 and 17-36 were rejected under U.S.C. §103(a) as being unpatentable over the Masaki patent in view of U.S. Patent No. 5,191,531 (hereafter 'the

Kurosu patent'). The Applicants respectfully traverse this rejection for at least the following reasons and request a reconsideration.

Independent Claim 1 –

First, independent claim 1 (which was present and previously allowed in the parent case) has been amended in order to more clearly and distinctly identify the invention, and now calls for "...determining said ignition signal and said air/fuel signal according to an independent operating sequence that is capable of being selected from a plurality of independent operating sequences by utilizing said speed signal." This claimed feature is clearly missing from both the Masaki and the Kurosu patents.

Turning first to Masaki, the device taught here includes an electronic computing circuit 50 capable of utilizing analog engine speed signals (n) , $f(n)$ in its air-to-fuel ratio calculation, however, it is not capable of utilizing either of those signals to select between independent operating sequences. The circuit 50 shown in Masaki receives analog signals from engine speed sensor 40, engine temperature sensor 45, throttle opening sensor 46 and atmospheric pressure sensor 48, and feeds them into a summing circuit 55 which then outputs an electronic functional signal S_i . Nowhere is it disclosed or even suggested that engine speed signals (n) , $f(n)$ could instead be used to select between independent operating sequences, nor is it clear that such independent operating sequences could even be executed on the analog circuitry taught therein. Accordingly, the Applicants respectfully disagree with the Examiner's assertion that the Masaki patent

discloses the claimed invention “except for the ignition device...,”¹ as this reference also fails to disclose the claimed use of independent operating sequences.

The Kurosu patent also fails to teach the recited use of independent operating sequences, as presently defined by the claims. With reference to the flowcharts shown in FIGS. 7a-b, an operation is described that determines a fuel injection pulse width, but makes no mention of selecting between independent operating sequences based on engine speed. The same is true for the injection timing flowchart shown in FIG. 8; that is, the operation described in conjunction with the flowchart of FIG. 8 does not include selecting an independent operating sequence based on engine speed. In fact, that operation makes no mention of engine speed at all.

Because both of the above-mentioned references fail to show the broad use of selection between independent operating sequences, as claimed, it follows that they also fail to show the more specific operating sequences called for in claims 6-9, 17-19, 21-29 and 31-32. The same reasons that form the basis for traversing the above-discussed 103(a) rejection of claim 1 equally apply to dependent claims 2-6, 10-14 and 17-19, all of which depend from claim 1.

Independent Claims 20, 30, 34 and 35 –

Independent Claims 20, 30, 34 and 35 (all of which were present and allowed in the parent case) also call for selecting from a plurality of independent operating sequences based, at least partially, on engine speed. Thus, for reasons similar to those just articulated and not reiterated here, the cited prior art fails to teach the subject matter

¹ Office Action dated May 4, 2005; page 4, first paragraph

of these independent claims, as well as dependent claims 21-29, 31-33 and 36, which depend therefrom.

Therefore, the Applicants respectfully traverse the §103(a) rejection of claim 1-6, 10-14 and 17-36 based on Masaki in view of Kurosu, for at least the reason that there is absolutely no teaching or even suggestion of selecting an independent operating sequence based on engine speed, let alone the specific independent operating sequences called for in some of the claims.

Allowable Subject Matter-

In the last Office Action, claims 7-9, 15 and 16 were objected to as being dependent upon a rejected base claim, but it was indicated that they would be allowed if rewritten in independent form including all of the limitations of the base claim and any intervening claims. These claims have been rewritten in independent form and are thus believed to be in a condition for allowance.

Conclusion

In view of the foregoing, applicants respectfully request reconsideration and allowance of all pending claims.

If, after considering this Response, the Examiner is of the view that any of these claims are not in a condition for allowance, a telephone interview is requested with applicants' attorney Michael Adams so that immediate consideration can be given to any amendments suggested by the Examiner or otherwise needed to place all the claims in a condition for allowance. The Examiner is asked to initiate or schedule a time for this

interview by telephoning Michael Adams at (248) 689-3500 who normally can be reached Monday through Friday between 9:00 A.M. and 5:00 P.M.

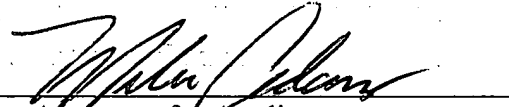
Additional Claim Fee

Our check for \$400.00 is enclosed to cover the cost of the additional independent claims. Any fee deficiencies are authorized to be charged to our Account No. 50-0852.

Respectfully submitted,

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By



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Enclosure